

U.S. Patent Application No. 10/575,768
Attorney Docket No. 10191/4217
RCE Response to Final Office Action of December 23, 2009
(in lieu of an Appeal Brief)

REMARKS

Claims 31 to 35 are added, and therefore claims 14, 15, 19 to 21, and 27 to 35 are now pending and being considered in the present application (since claims 22 to 26 were previously *withdrawn* in response to a restriction requirement).

In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Claims 14 to 21 and 27 to 29 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,253,123 to Schramm et al., (“Schramm”).

To reject a claim under 35 U.S.C. § 102(b), the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (*See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the claimed subject matter of the claims, as discussed herein. (*See Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)).

As further regards the anticipation rejections, to the extent that the Final Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Office must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art.” (*See* M.P.E.P. § 2112; emphasis in original; and *see Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int’l. 1990)). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Accordingly, it is respectfully submitted that any anticipation rejection premised on the inherency doctrine is not sustainable absent the foregoing conditions.

Regarding independent claim 14, it includes the features of “*estimating information on a center of gravity* of the vehicle, in which the rollover stabilization algorithm is executed as a function of the vehicle mass and the information on the center of gravity of the vehicle, and the *information on the center of gravity of the vehicle is derived from an estimated characteristic speed*.” In this regard, the Specification of the present application specifically discloses the following:

U.S. Patent Application No. 10/575,768
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According to a first specific example embodiment of the present invention, the vehicle's center of gravity (this includes also information from which the vehicle's center of gravity may be derived) is estimated by evaluating a characteristic speed v_{ch} of the vehicle. The characteristic speed is a parameter in the known "Ackermann equation", and it describes the characteristic steering behavior of a vehicle.

(*Substitute Specification*, page 5, lines 9 to 15.) The Schramm reference does not identically disclose (nor even suggest) the feature of the information on the center of gravity of the vehicle being derived from an estimated characteristic speed, as provided in the context of claim 14 and the Specification.

The Final Office Action conclusorily asserts that "Fig 2 - 4; col 3, lines 21 - 57; col 6, line 38 - col 7, line 60; col 11; col 9, lines 20 - 47; col 11, line 58 – col 2, line 1" somehow discloses the above discussed feature. (Final Office Action, page 3, emphasis added). It is not clear which sections the Office intended to cite because some of the ranges are non-linear. Further, the Final Office Action does not explain, nor is it readily apparent, how any section of Schramm could possibly disclose the claimed subject matter. Regardless, any review of the entire Schramm reference (including the cited text) makes plain that there is not even a discussion of information on the center of gravity being derived from a characteristic speed, let alone this characteristic speed being estimated as provided for in the context of the presently claimed subject matter.

Indeed, in the Amendment dated September 9, 2009, Applicants specifically explained why Schramm does not identically disclose or suggest the feature of "information on the center of gravity of the vehicle is derived from an estimated characteristic speed." The Final Office Action does not address these arguments. Instead, the Final Office Action simply repeated unclearly cited sections of the Schramm reference. In this regard, the M.P.E.P. provides that in making a final rejection, any grounds of rejection "must . . . be *clearly developed* to such an extent that applicant may readily judge the advisability of an appeal unless a single previous Office action contains a complete statement supporting the rejection[, in which case] the final rejection may refer to such a statement and also *should include a rebuttal* of any arguments raised in the applicant's reply." (M.P.E.P. § 706.07(a), emphasis added).

Accordingly, the Final Office Action does not address all the arguments "presented by the applicant which are still relevant to any references being applied," and includes

U.S. Patent Application No. 10/575,768
Attorney Docket No. 10191/4217
RCE Response to Final Office Action of December 23, 2009
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grounds of rejection which are not “clearly developed to such an extent that applicant may readily judge the advisability of an appeal.”

In view of all of the foregoing, Applicants respectfully request withdrawal of the finality of the present Office Action. Applicants further request that the next Office communication address all of the arguments previously presented and clearly cite the pertinent sections of the asserted prior art, as required by the M.P.E.P.

In view of the foregoing, it is respectfully submitted that claim 14 is allowable, as are its dependent claims 15, 19 to 21, and 27 to 29. Accordingly, withdrawal of the anticipation rejections is respectfully requested.

New claims 31 to 35 do not add any new matter and are supported by the present application, including the specification. Claims 31 to 35 depend from claim 14 and they are therefore allowable for the same reasons, and for the further reasons that they include combinations of features that are not disclosed or suggested by the applied references.

Claim 31, for example, provides that the center of gravity of the vehicle is estimated by evaluating a characteristic vehicle speed v_{ch} , which is a parameter in the Ackermann equation, which calculates a yaw rate $d\psi/dt$ of the vehicle according to the so-called “single-track model”,

$$d\psi/dt = \frac{v_x \cdot \delta_R}{l \cdot (1 + v_x^2 : v_{ch}^2)},$$

where v_x is the vehicle speed in the longitudinal direction, δ_R is the steering angle and v_{ch} is the characteristic vehicle speed, wherein when the center of gravity is shifted upwards, a vehicle demonstrates a more strongly understeering driving behavior, and consequently has a lower characteristic speed, and vice versa, wherein when there is a shifting of the center of gravity to the rear (at a constant mass and a constant height of the center of gravity), the vehicle demonstrates a less understeered vehicle behavior and consequently a greater characteristic speed v_{ch} , and vice versa, and wherein from a deviation of the estimated characteristic speed v_{chEst} from a nominal estimated speed v_{chNom} , at least qualitatively information is obtained on a position of the load, including at least one of a height of the center of gravity and a position in a longitudinal direction of the vehicle. Claim 31 is allowable for these further reasons, since they are not disclosed by the applied references.

Claim 32, for example, provides that the center of gravity of the vehicle, including a height of the center of gravity, is estimated from contact patch forces of the wheels at an inside

U.S. Patent Application No. 10/575,768
Attorney Docket No. 10191/4217
RCE Response to Final Office Action of December 23, 2009
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wheel and an outside wheel during cornering, wherein at a high mass center of gravity, a contact patch force at the outer wheel is comparatively higher than for a low mass center of gravity (at an equal mass of the payload) at a same transverse acceleration, wherein because of an increased tendency of the vehicle to roll over, the outer wheels are more greatly unloaded at high mass center of gravity, and wherein from a ratio of the contact patch forces F_{Nl}/F_{Nr} of an inner wheel and an outer wheel, the height of the center of gravity of the vehicle is at least qualitatively estimated. Claim 32 is allowable for these further reasons, since they are not disclosed by the applied references, as are its dependent claims 33 to 35.

Accordingly, claims 14, 15, 19 to 21, and 27 to 35 are allowable.

CONCLUSION

In view of the foregoing, it is respectfully submitted that pending and considered claims 14, 15, 19 to 21, and 27 to 35 are allowable. It is therefore respectfully requested that the rejections (and any objections) be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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